REPAIR INSTRUCTIONS

Cat. No. 5339-20
SDS Max Demolition Hammer

Cat. No. 5342-20
SDS Max Rotary Hammer

MILWAUKEE ELECTRIC TOOL CORPORATION
13135 W. LISBON ROAD • BROOKFIELD, WISCONSIN 53005-2550

58-92-5305 d1
022005

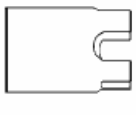
Special Tools Require

– Forcing discs	61-10-0011
– Hex key 4 mm	
– Hex key 5 mm	
– Sleeve	61-10-0013
– Pin-type face spanner	61-10-0012
– Spindle Fixture (optional)	61-30-0290

61-10-0011

61-10-0012

61-10-0013

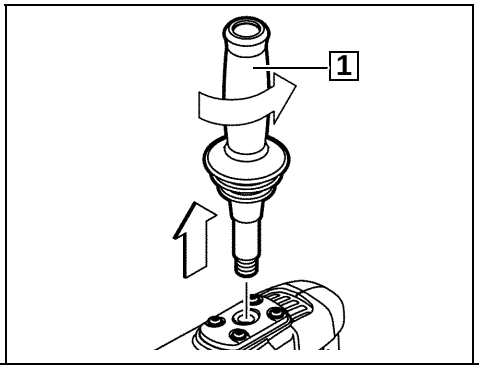

61-30-0290

Important!
- Before beginning the maintenance work, perform an initial check with a high voltage test.
- Before performing repair work, disconnect the power cord from the electrical outlet!

Disassembly

Removing the auxiliary handle

1 Remove handle (1) by turning it counter-clockwise.

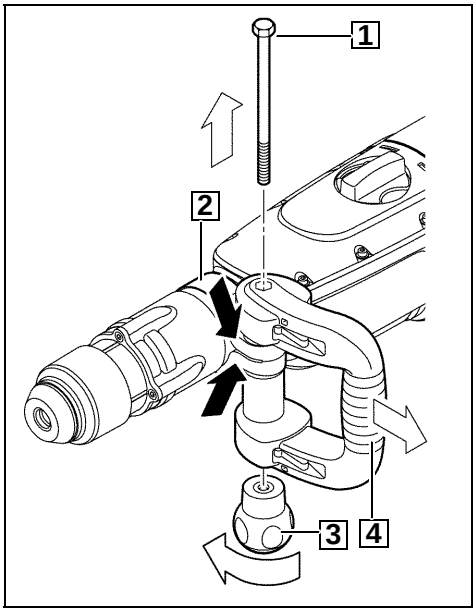


1

Disassembling the handle

1 Unscrew knob (3) and remove screw (1).

2 Press spring ring (2) in direction of the arrows and remove handle (4).

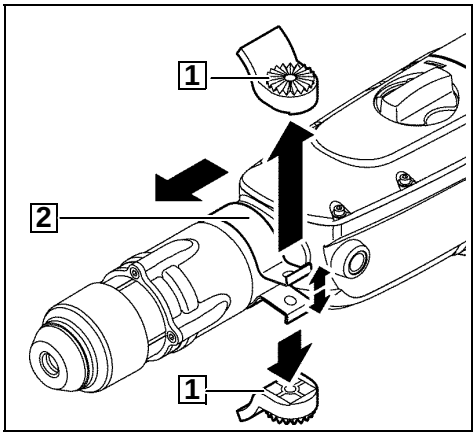


2

Removing the spring ring

1 Remove both retainers (1).

2 Slightly spread spring ring (2) and pull it off the machine towards the front.



3

Removing the end cover cap

☞ Position machine in a vertical position.

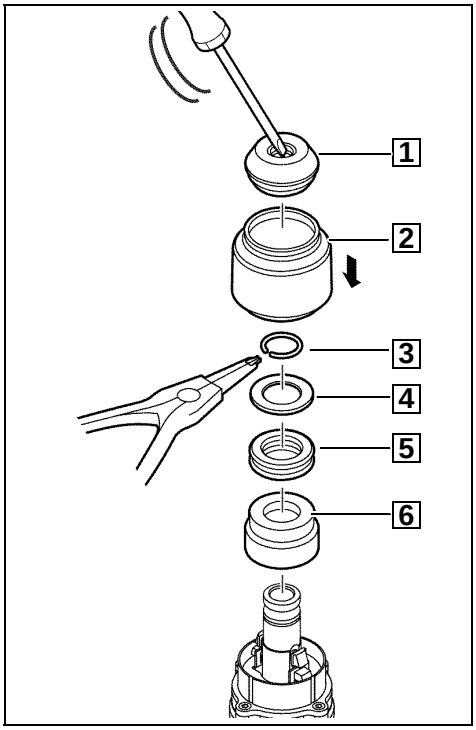
1 Depress sleeve (2) and remove end cover cap (1) with aid of a screwdriver.

2 Remove sleeve (2).

3 Remove retaining ring (3).

4 Remove the following parts:
- damping element (4)
- damping ring (5)
- interlock sleeve (6).

☞ Removing/levering off damping ring (5) prior to removing retaining rings (3) will be an alternative method of spindle disassembly



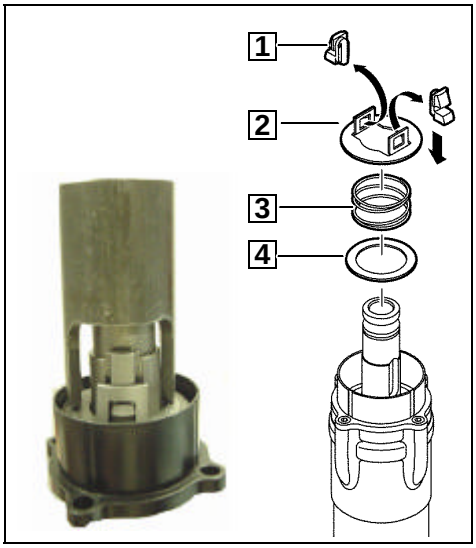
4

Removing the interlock elements

1 Depress interlock plate (2) against pressure springs (3) until interlock elements (1) are released. Remove them, if necessary with aid of a screwdriver.

2 Remove the following parts:
- interlock plate (2)
- pressure spring (3),
- washers (4).

☞ Using service fixture #61-30-0290, with two legs removed, will allow equal pressure to be applied to both sides of the interlocking elements for easy removal.



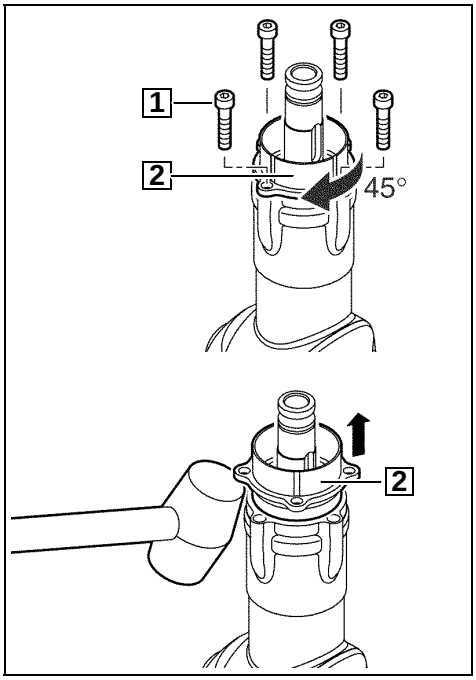
5

Removing the seal retainer

1 Remove four screws (1) with a 5 mm hex key.

2 Turn seal retainer (2) 45° and remove it with a plastic face hammer from below (see illustration).

☞ Removal of seal retainer (2) only requires light hammer blows at each of the four screw holes. Striking seal retainer with heavy blows can damage retainer.



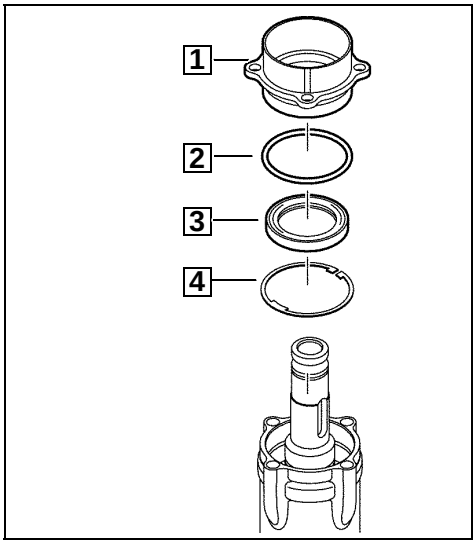
6

Disassembling the seal retainer

1 Remove outer o-ring (2) from seal retainer (1).

2 Remove inner seal ring (3) from seal retainer (1).

3 Remove retaining ring (4) from the gearbox.

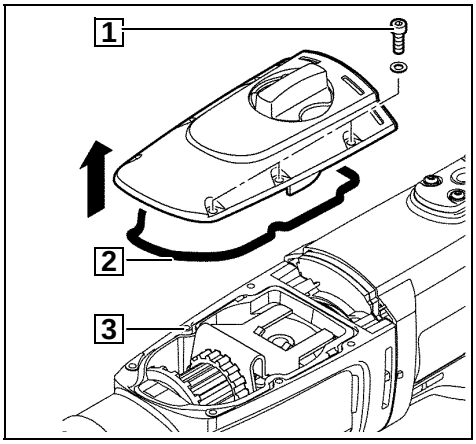


7

Removing the upper gear box cover

1 Remove six screws (1) with washers from the gear box cover.

2 Remove gasket (2) from groove of gear box (3).



8

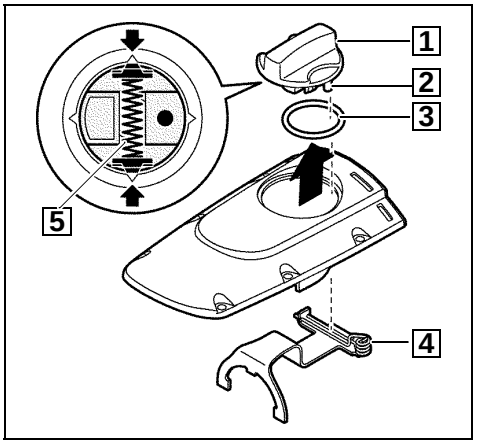
Removing the lever

1 Remove adjusting plate assembly (4) from pin (2) located on lever (1).

2 Squeeze spring (5) together at the bottom side of lever (1) and remove lever from gear box cover.

3 Remove O-ring (3).

☞ When removing adjusting plate (4) from pin (2) take care to not bend spring assembly.



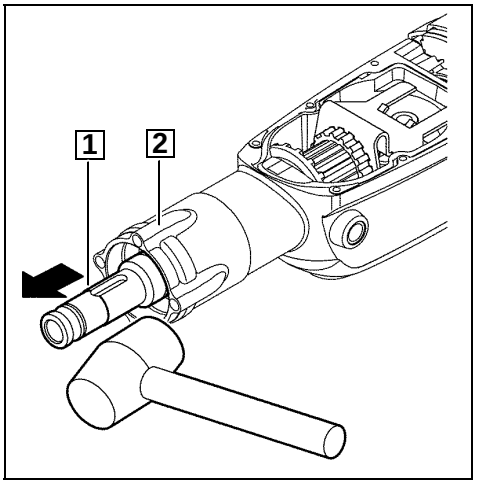
9

Combined drill/chisel hammer:

Removing spindle assembly

1 Loosen spindle assembly (1) by turning it slightly and pulling it from the front of the gear box (in direction of arrow).

☞ In case of stiffness, lightly tap gear box (2) with a plastic face hammer. Spindle assembly (1) will be released in direction of arrow.



10

Chisel hammer:

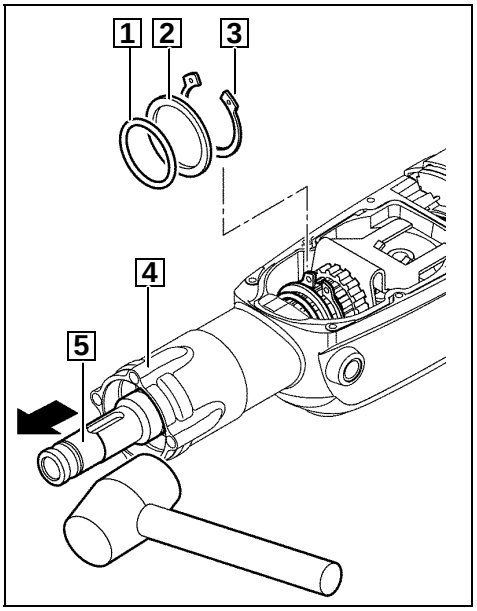
Removing spindle assembly

1 Remove retaining ring (3) using retaining ring pliers from spindle groove.

2 Loosen spindle assembly (5) by turning it slightly and pulling it from front of gear box (in direction of arrow).

☞ In case of stiffness, lightly tap gear box (4) with a plastic face hammer. Spindle (5) will be released in direction of arrow.

3 Remove retaining ring (3), washer (2) and O-ring (1) from gear box (4).



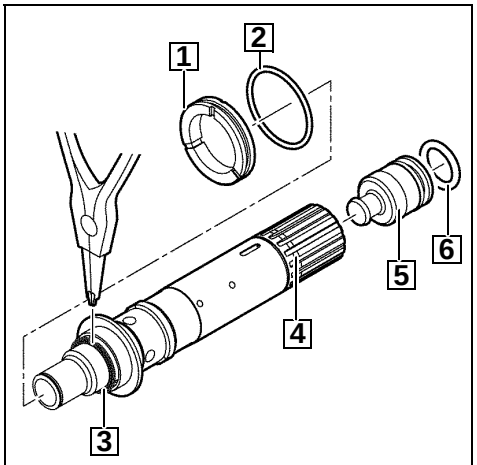
10

Disassembling the spindle assembly

1 Remove thrust collar (1) from spindle (4). Remove O-ring (2) from thrust collar (1).

2 Remove ram assembly (5) from spindle (4) by tapping it lightly with a plastic face hammer.
Remove O-ring (6) from ram (5).

3 Remove retaining ring (3) from spindle.



11

Disassembling the spindle assembly

1 Remove following parts from spindle (D):
- roller race (1)
- washer (2)
- o-ring (3)
- attachment washer (4).

2 Remove four rollers (C) with a magnetic screwdriver from spindle (D).

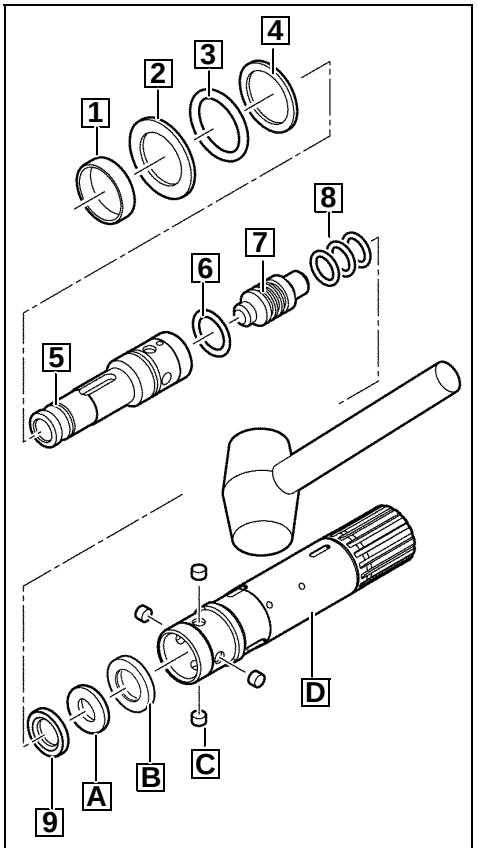
☞ In case of stiffness, remove rollers (C) with light taps with a plastic face hammer. Twist the spindle and driver back and forth while tapping to aid in easy roller removal.

3 Remove striker guide (5) from spindle (D).

4 Remove striker (7) and o-ring (6) from striker guide (5).

5 Remove three o-rings (8) from striker (7).

6 Remove thrust collar (9), pressure o-ring (A), and washer (B) from spindle (D).



12

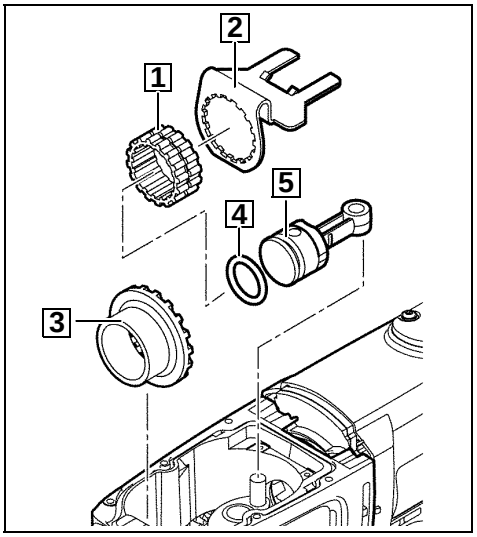
Removing the piston assembly

1 Position piston assembly (5) into the back dead center position.

2 **Combined drill/chisel hammer:** Remove spindle bevel gear (3) from gear box.

3 Remove set collar (1) and locking plate (2) from gear box.

4 Remove the piston assembly (5) upwards. Remove o-ring (4) from piston (5).



13

Disassembling the motor housing

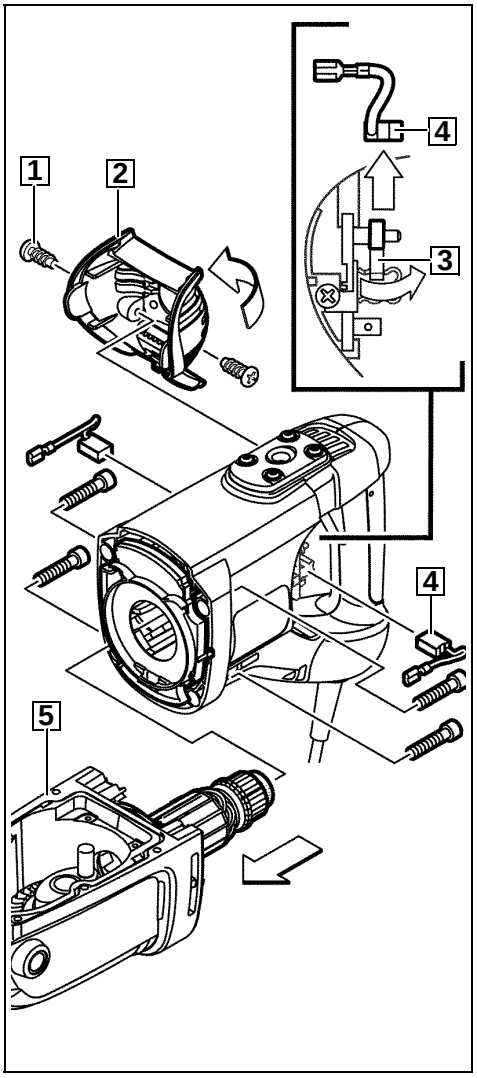
1 Remove the two screws (1) from service cover (2) and remove service cover (2) in direction of arrow.

2 Lift springs (3) on both sides of carbon brush cover and pull carbon brushes out (4). Pull the carbon brush leads off.

3 Remove four hex head screws (4) from the motor housing.

4 Pull gear box (5) with the armature from the motor housing.

☞ Carbon brush set consists of two brushes, one brush has a secondary lead incorporated into it. This lead must be disconnected from the electronic module at this time.



14

Disassembling the armature

1 Remove three hex head screws (8) from bearing end plate (7) and pull complete armature assembly (B) with bearing end plate (7) from gear box (1).

2 Remove o-ring (2) from gear box (1).

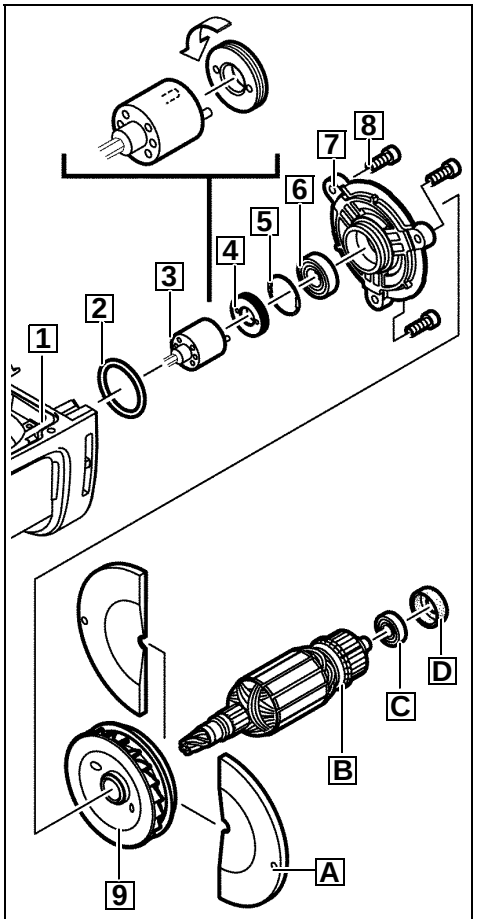
3 Insert the pin-type face spanner (61-10-0012) (3) into seal nut (4) and remove seal nut (4) counter-clockwise. Remove bearing end plate (7).

4 Remove retaining ring (5) from bearing end plate (7) and press out bearing (6).

5 Separate fan (9) from armature (B) with forcing discs (A).

6 Remove bearing cup (D) and press off bearing (C).

☞ If armature fan (9) requires removal, use service fixture (A) #61-10-0011 as illustrated. (Follow fan reassembly procedure).



15

Removing the crank wheel

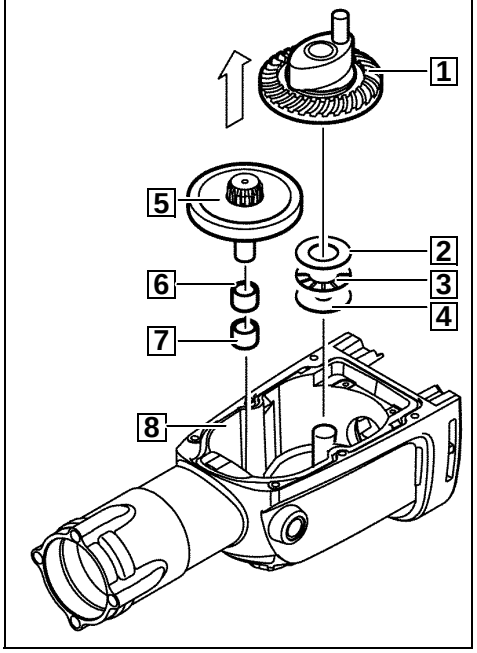
1 Remove following parts from gear box (8):
- crank wheel (1)
- thrust washer (2)
- thrust bearing (3)
- thrust washer (4).

2 **Combined drill/chisel hammer:** Additionally remove clutch (5) from gear box (8).

3 Remove caged needle bearings (6 and 7) by simply lifting them out of the gear box.

☞ The **chisel hammer** does not have a clutch (5) and needle bearings (6 & 7)!

☞ No cleaning solvent should penetrate into clutch; wipe any old lubrication off clutch assembly using a dry, clean rag.

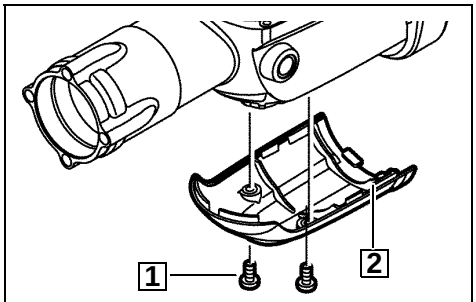


16

Removing the lower gear box cover

1 Remove two screws (1) and remove lower gear box cover (2).

☞ The exposed plane surface serves only for manufacturing the gear box and has no other function!



17

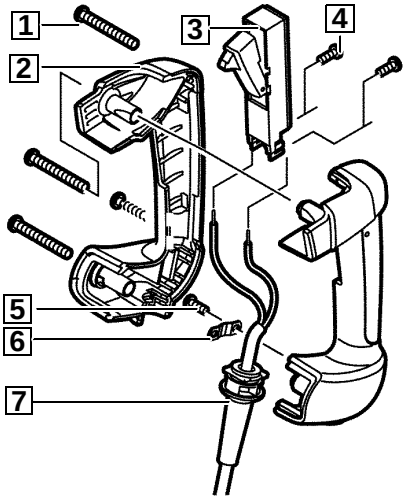
Disassembling the electronic component

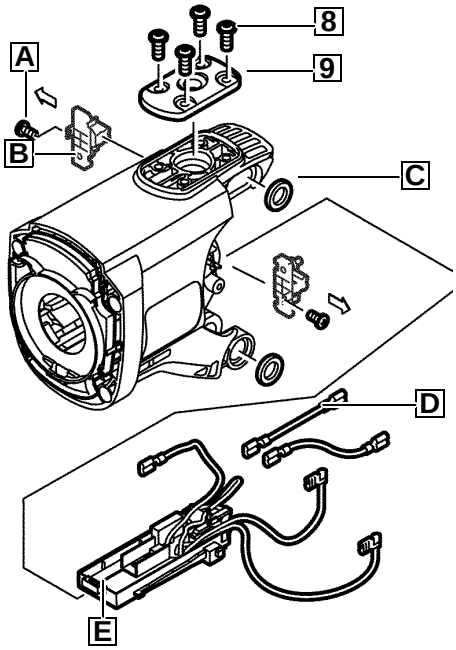
1 Remove the four screws (1) from the handle and remove handle half (2).

2 To remove cord leads, remove/loosen two screws (4) from switch (3).

3 Remove screws (5) from cord clamp (6) and remove the cord (7).

4 Remove the following parts:
- four o-rings (C)
- two wires (D)
- two screws (A)
- two carbon brush holders (B)
- electronic part (E)
- four screws (8)
- side handle plate (9).





18

Removing the anti-vibration mechanism and the field

1 Remove air deflector ring (5).

2 Remove screw (4). Remove the following parts of the anti-vibration mechanism from motor housing (8):

– thrust piece (1)

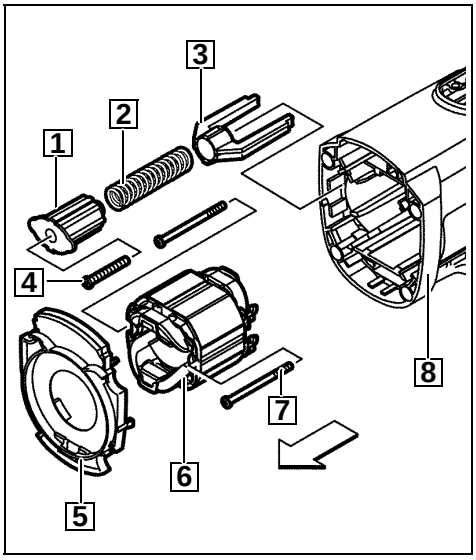
– spring (2)

– vibration lever(3).

☞**Caution:** Screw (4) and vibration spring cover (1) are under spring pressure.

3 Remove two screws (7) and remove field (6) from motor housing (8).

☞ Should the field be stuck, tap motor housing (8) lightly with a plastic face hammer.



19

Maintenance

General	It is recommended that maintenance be performed on the machine at regular intervals or when the carbon brushes reach end of life.
Cleaning	Clean all parts – with the exception of the electrical parts and clutch– with cold cleaning solvent. Caution! No cleaning solvent should penetrate into the bearing. Clean the electrical parts with a dry brush.
Check for wear	Check the disassembled parts for wear (visual inspection) and replace worn parts.
Electrical tests	Before reassembling, perform an electrical test on all relevant parts (refer to repair instructions).
Lubrication	Each time carbon brushes wear out and loose contact with commutator it is recommended that the machine be fully disassembled and all old grease removed and replaced with new grease. Service maintenance kit No. 14-46-0041 contains all necessary lubrication, gaskets and o-rings to properly service the macine. Refer to service maintenance kit information below to determine which lubrication instructions need to be followed.

Maintenance Kit No. 14-46-0041 contains three (3) different greases:
Type ‘P’ grease (2 - 100g tubes)
Type ‘L’ bit grease (1 - 20g tube)
Type ‘Q’ grease (1 - 45g tube)

OR

Type ‘P’ grease (2 - 100g tubes)
Type ‘L’ bit grease (1 - 20g tube)
Type ‘Q2’ grease (1 - 45g tube)

Check your maintenance kit and determine if there is Type ‘Q’ or Type Q2” grease and follow the instructions for the tool that you have located on pages 12 and 13.

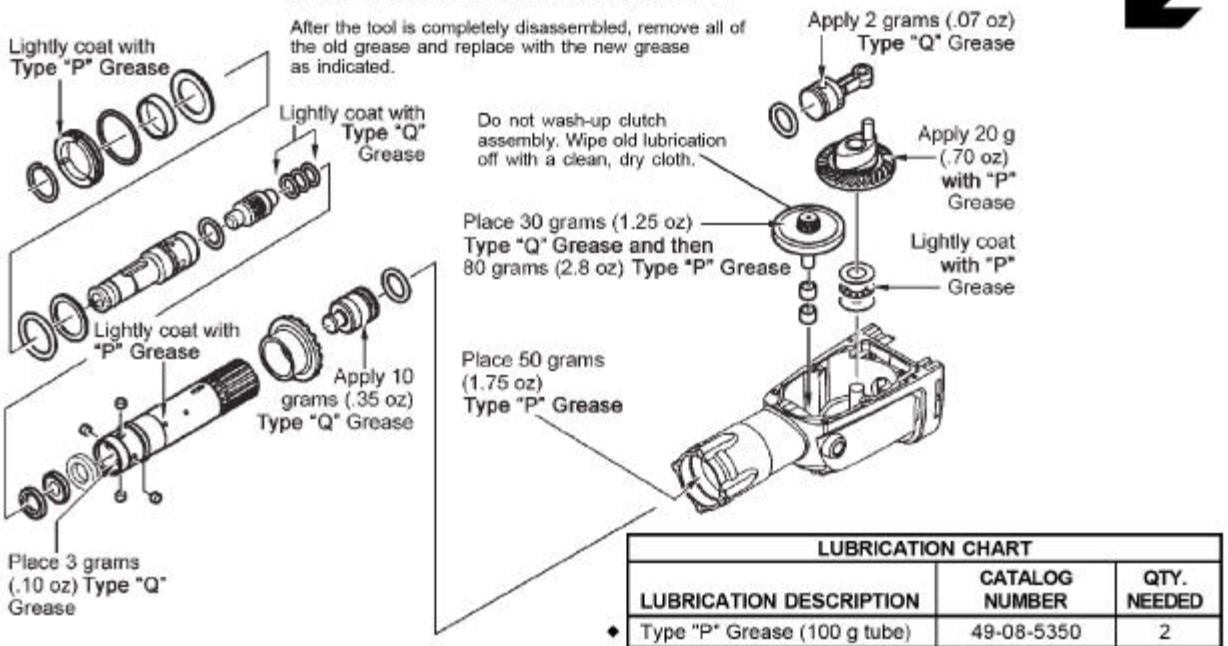
Lubrication: Combined drill/chisel hammer (5342-20)

MAINTENANCE KIT CONTAINING "Q" GREASE, FOLLOW THESE INSTRUCTIONS

LUBRICATION NOTES:

Lubrication of this tool should be performed at regular intervals or when the carbon brushes switch off at the latest.

After the tool is completely disassembled, remove all of the old grease and replace with the new grease as indicated.


Lightly coat with Type "P" Grease
Lightly coat with Type "Q" Grease
Lightly coat with "P" Grease
Apply 10 grams (.35 oz) Type "Q" Grease
Place 3 grams (.10 oz) Type "Q" Grease
Apply 2 grams (.07 oz) Type "Q" Grease
Do not wash-up clutch assembly. Wipe old lubrication off with a clean, dry cloth.
Apply 20 g (.70 oz) with "P" Grease
Place 30 grams (1.25 oz) Type "Q" Grease and then 80 grams (2.8 oz) Type "P" Grease
Lightly coat with "P" Grease
Place 50 grams (1.75 oz) Type "P" Grease

LUBRICATION CHART		
LUBRICATION DESCRIPTION	CATALOG NUMBER	QTY. NEEDED
◆ Type "P" Grease (100 g tube)	49-08-5350	2
◆ Type "Q" Grease (45 g tube)	49-08-4255	1
Type "L" Bit Grease (20 g tube)	49-08-5383	1

Approximately 150 grams (5.3 oz) of Type "P" Grease and 45 grams (1.75 oz) of Type "Q" Grease will be needed in total.

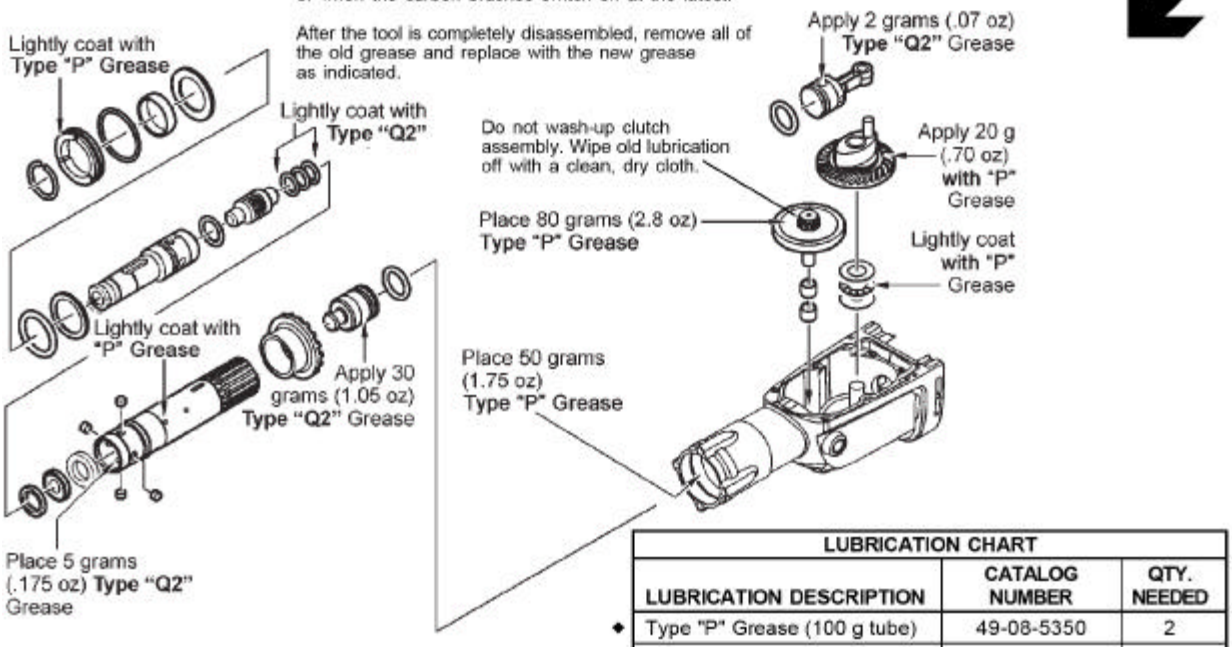
◆=Component of the 14-46-0041 Maintenance Set.

MAINTENANCE KIT CONTAINING "Q2" GREASE, FOLLOW THESE INSTRUCTIONS

LUBRICATION NOTES:

Lubrication of this tool should be performed at regular intervals or when the carbon brushes switch off at the latest.

After the tool is completely disassembled, remove all of the old grease and replace with the new grease as indicated.


Lightly coat with Type "P" Grease
Lightly coat with Type "Q2"
Lightly coat with "P" Grease
Apply 30 grams (1.05 oz) Type "Q2" Grease
Place 5 grams (.175 oz) Type "Q2" Grease
Apply 2 grams (.07 oz) Type "Q2" Grease
Do not wash-up clutch assembly. Wipe old lubrication off with a clean, dry cloth.
Apply 20 g (.70 oz) with "P" Grease
Place 80 grams (2.8 oz) Type "P" Grease
Lightly coat with "P" Grease
Place 50 grams (1.75 oz) Type "P" Grease

LUBRICATION CHART		
LUBRICATION DESCRIPTION	CATALOG NUMBER	QTY. NEEDED
◆ Type "P" Grease (100 g tube)	49-08-5350	2
◆ Type "Q2" Grease (45 g tube)	49-08-5345	1
Type "L" Bit Grease (20 g tube)	49-08-5383	1

Approximately 150 grams (5.3 oz) of Type "P" Grease and 37 grams (1.32 oz) of Type "Q2" Grease will be needed in total.

◆=Component of the 14-46-0041 Maintenance Set.

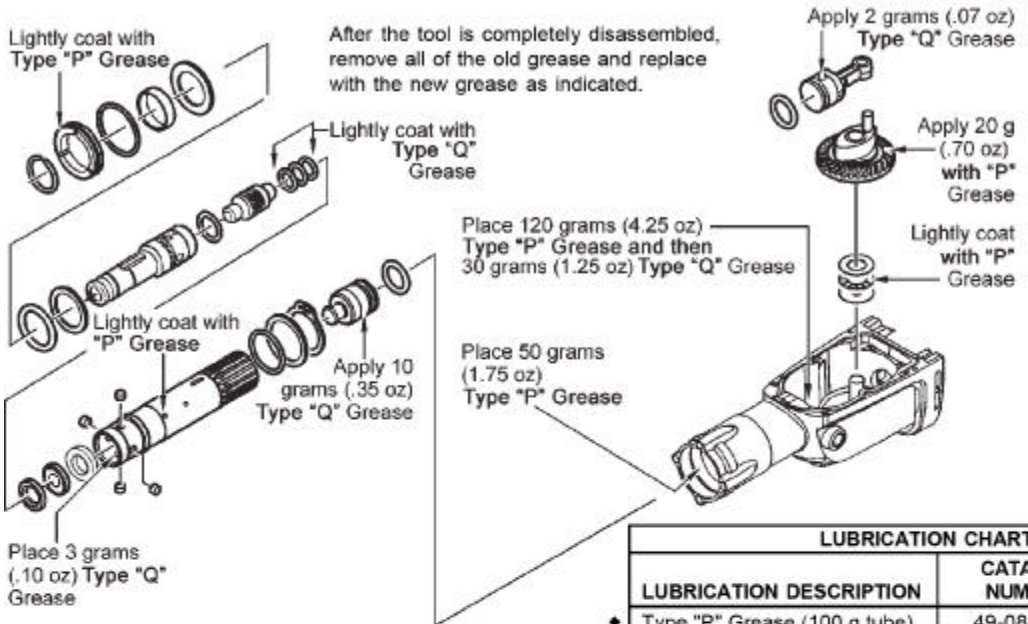
Lubrication: Chisel hammer (5339-20)

MAINTENANCE KIT CONTAINING "Q" GREASE, FOLLOW THESE INSTRUCTIONS

LUBRICATION NOTES:

Lubrication of this tool should be performed at regular intervals or when the carbon brushes switch off at the latest.

After the tool is completely disassembled, remove all of the old grease and replace with the new grease as indicated.


Lightly coat with Type "P" Grease
Lightly coat with Type "Q" Grease
Lightly coat with "P" Grease
Apply 10 grams (.35 oz) Type "Q" Grease
Place 3 grams (.10 oz) Type "Q" Grease
Apply 2 grams (.07 oz) Type "Q" Grease
Apply 20 g (.70 oz) with "P" Grease
Lightly coat with "P" Grease
Place 120 grams (4.25 oz) Type "P" Grease and then 30 grams (1.25 oz) Type "Q" Grease
Place 50 grams (1.75 oz) Type "P" Grease

LUBRICATION CHART		
LUBRICATION DESCRIPTION	CATALOG NUMBER	QTY. NEEDED
◆ Type "P" Grease (100 g tube)	49-08-5350	2
◆ Type "Q" Grease (45 g tube)	49-08-4255	1
Type "L" Bit Grease (20 g tube)	49-08-5383	1

Approximately 190 grams (6.7 oz) of Type "P" Grease and 45 grams (1.75 oz) of Type "Q" Grease will be needed in total.

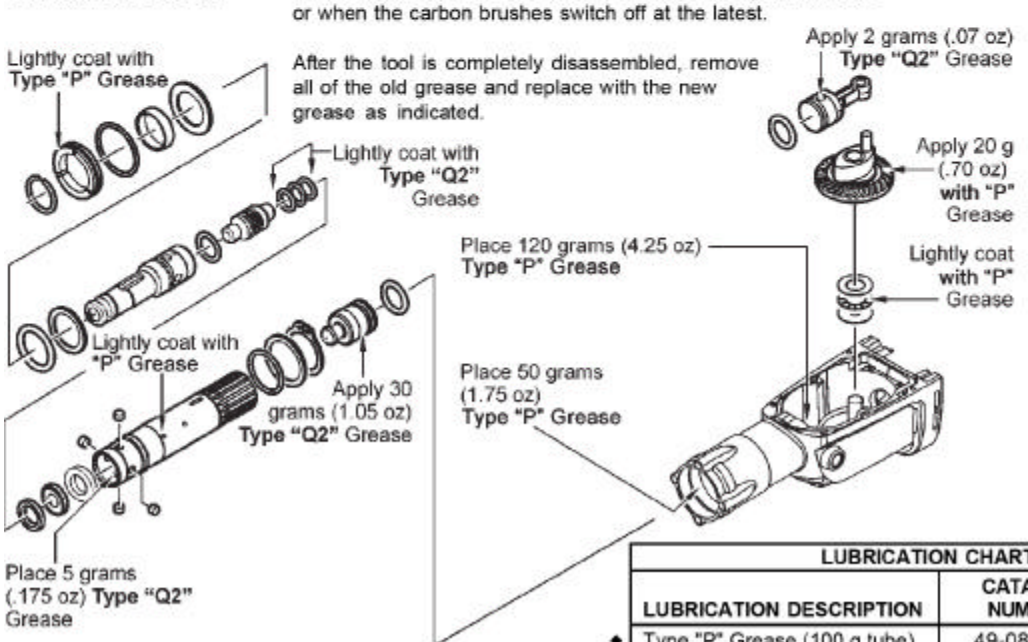
◆=Component of the 14-46-0041 Maintenance Set.

MAINTENANCE KIT CONTAINING "Q2" GREASE, FOLLOW THESE INSTRUCTIONS

LUBRICATION NOTES:

Lubrication of this tool should be performed at regular intervals or when the carbon brushes switch off at the latest.

After the tool is completely disassembled, remove all of the old grease and replace with the new grease as indicated.

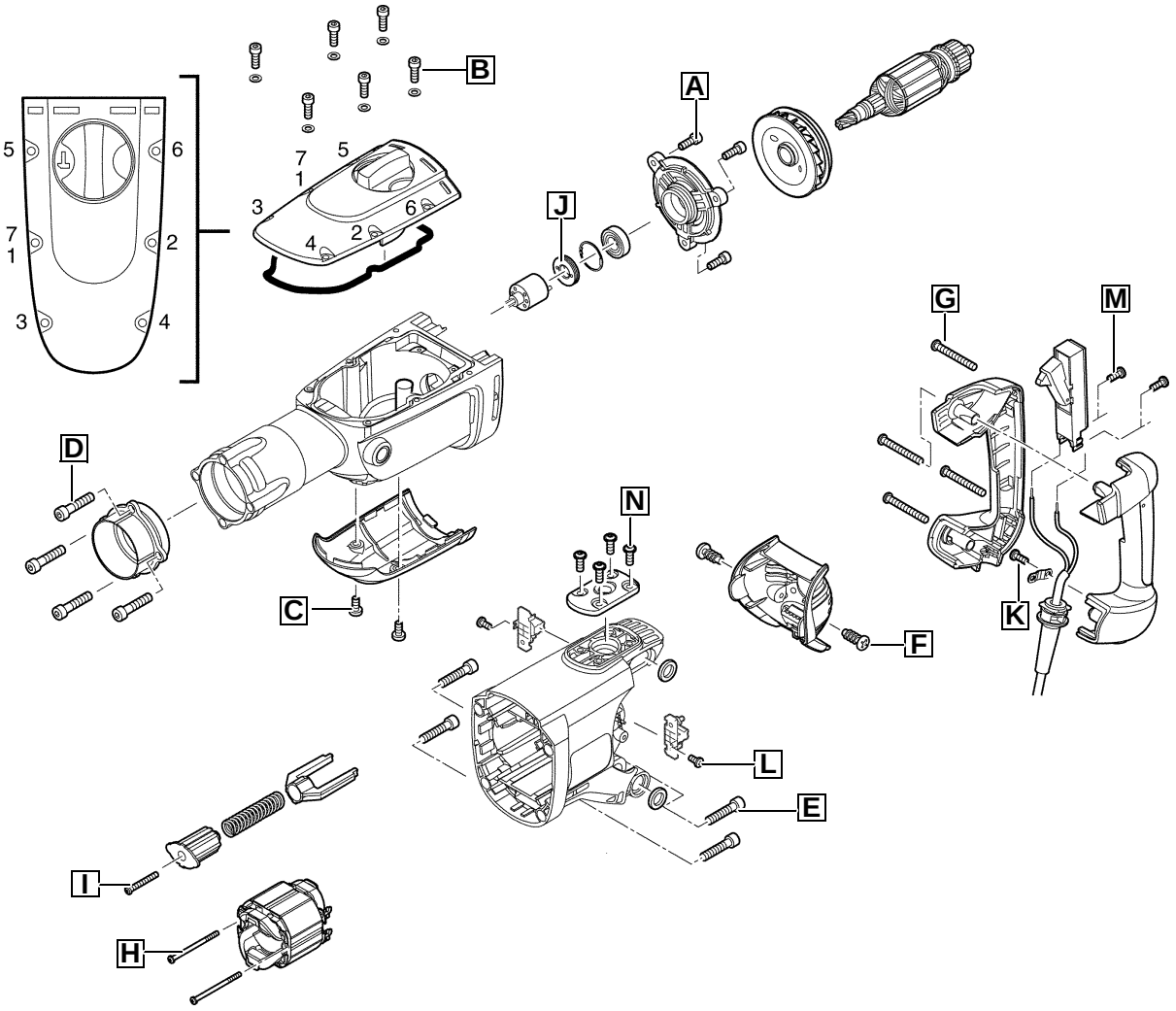

Lightly coat with Type "P" Grease
Lightly coat with Type "Q2" Grease
Lightly coat with "P" Grease
Apply 30 grams (1.05 oz) Type "Q2" Grease
Place 5 grams (.175 oz) Type "Q2" Grease
Apply 2 grams (.07 oz) Type "Q2" Grease
Apply 20 g (.70 oz) with "P" Grease
Lightly coat with "P" Grease
Place 120 grams (4.25 oz) Type "P" Grease
Place 50 grams (1.75 oz) Type "P" Grease

LUBRICATION CHART		
LUBRICATION DESCRIPTION	CATALOG NUMBER	QTY. NEEDED
◆ Type "P" Grease (100 g tube)	49-08-5350	2
◆ Type "Q2" Grease (45 g tube)	49-08-5345	1
Type "L" Bit Grease (20 g tube)	49-08-5383	1

Approximately 190 grams (6.7 oz) of Type "P" Grease and 37 grams (1.32 oz) of Type "Q2" Grease will be needed in total.

◆=Component of the 14-46-0041 Maintenance Set.

Sequence and torques of the screws:



SEQUENCE AND TORQUES OF SCREWS			
	Fastener/Part Description	Torque (Nm)	Torque (Lbs-In)
A 1)	Bearing End Plate Screws	4	35
B 1)	Upper Gear Box Cover Screws	4.5	40
C	Lower Gear Box Cover Screws	3	27
D 1)	Nose Piece Screws	18	159
E 1)	Motor Housing Screws	13	115
F	Servicing Lid Screws	1.3	12
G	D-Handle Screws	3	27
H	Field Screws	2	18
I	Anti-Vibration Mechanism Scr.	3	27
J	Seal Nut	16	141
K	Strain Relief Clamp Screws	1.3	12
L	Carbon Brush Holders	1.3	12
M	Switch Screws	0.5	4
N	Side Handle Plate Screws	4	35

1) Apply blue Loctite® ThreadLocker 242 or equivalent.

Assembly

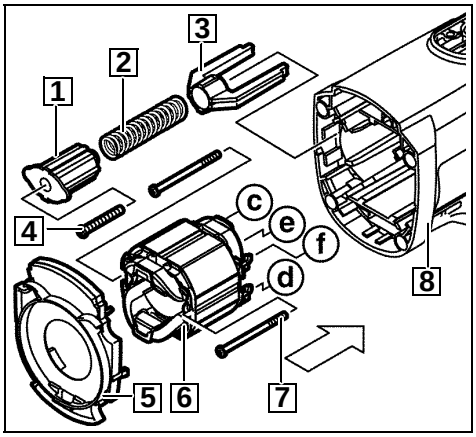
Installing the anti-vibration mechanism and field

1 Install field (6) into motor housing (8) and secure it with two screws (7) (torque = 2 Nm / 18 in. lbs.).

2 Install following parts of the anti-vibration mechanism into motor housing (8):
- vibration lever (3)
- spring (2)
- vibration spring cover (1).

3 Tighten anti-vibration mechanism with screw (4) (torque = 3 Nm / 27 in. lbs.).

4 Insert air deflector ring (5) into motor housing (8). Mind the right position!



1

Assembling the electronic component

1 Install the following parts:
- side handle plate (9)
- motor housing screws (8) (torque = 4 Nm / 35 in. lbs.)
- dial switch (E)
- two carbon brush holders (B)

☞ Insert end of flat spiral spring (G) into slot (H) in pin of carbon brush holder as indicated in enlargement of figure (meaning: hook flat spiral spring (G) into pin in “11 o’clock” position!). Tension flat spiral spring by 1 turn in a clockwise direction. Afterwards position other spring end (I) onto carbon brush holder (“ready position”).

☞ two switch screws (A) (torque = 1.3 Nm / 12 in. lbs.)
- two wires (D)
- four O-rings (C).

☞ Take care that no wires are jammed or pinched.

☞ All wires must be correctly installed between the cable entry lugs (refer to wiring instructions).

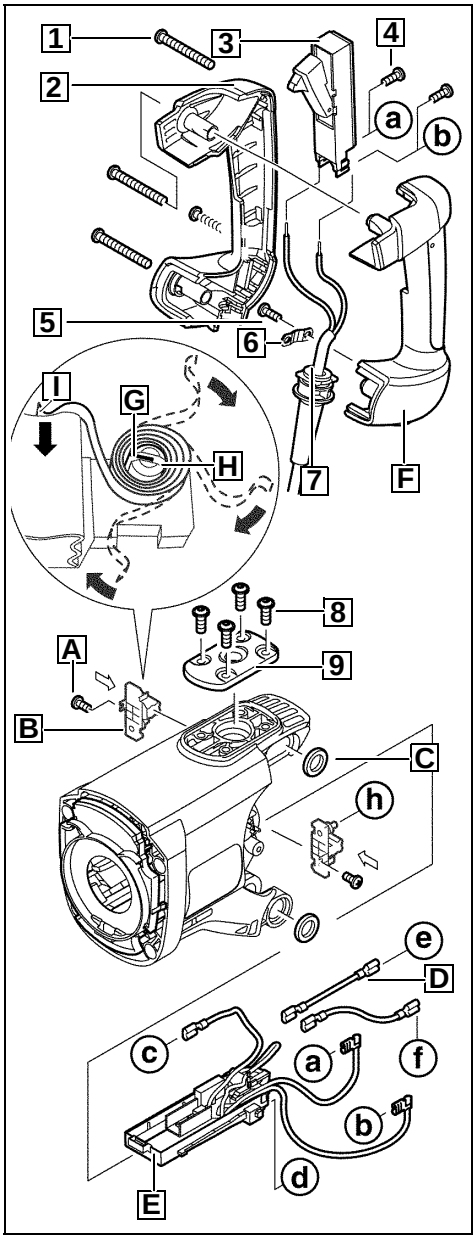
2 Install switch (3) into handle half (F).

3 Install cord (7) and secure cord clamp (6) with screws (5) (torque = 1.3 Nm / 12 in. lbs).

4 Connect cord leads (7) to switch (3) and secure screws (4) (torque = 0.5 Nm / 4 in. lbs.).

5 Install handle half (2) and secure handle half with four screws (1) (torque = 3 Nm / 27 in. lbs.).

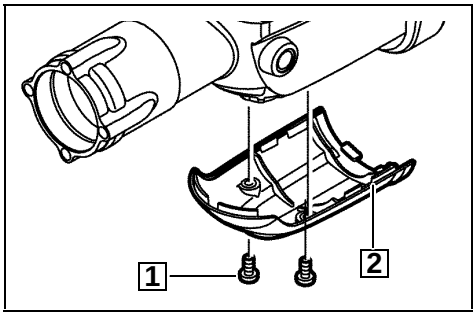
⚠ CAUTION:
Always refer to and follow the most current service parts list wiring instructions for tool being repaired.



2

Installing the gear box cover

1 Secure gear box cover (2) with two screws (1) onto the gear box (torque = 3 Nm / 27 in. lbs.).



3

Combined drill/chisel hammer:

Installing the clutch and crank assembly

1 Place caged needle bearings (1) into lubricated steel sleeve in gear box (2).

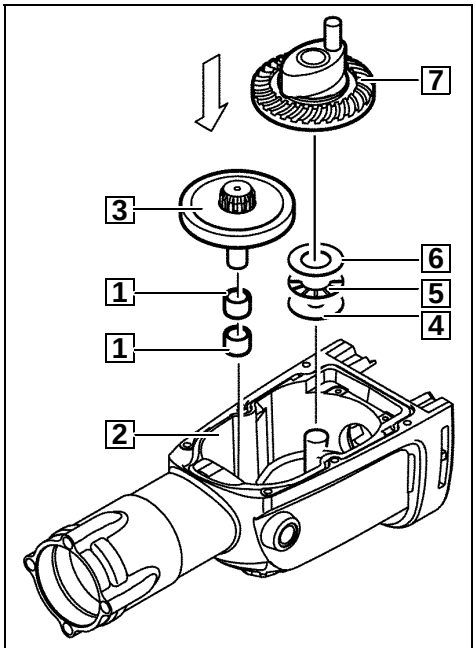
2 Install clutch assembly (3) into gear box (2) in direction of arrow.

3 Install the following pre-lubricated parts over the stationary axle inside gear box (2).

- thrust washer (4)
- thrust bearing (5)
- thrust washer (6)

4 Install crank wheel assembly (7) over gear box axle assembly in direction of arrow.

☞ The clutch is pre-set and should release between (96 ft. lbs. / 130 Nm) to (140 ft lbs. / 190 Nm). See instructions for checking the static slip of the clutch.



4

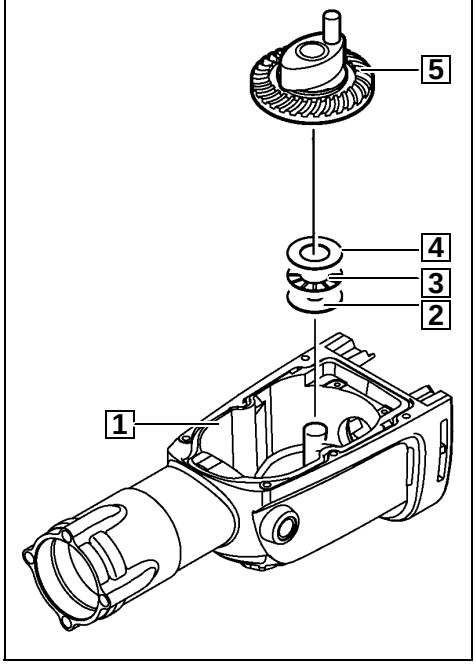
Chisel hammer:

Installing the crank assembly

1 Install the following pre-lubricated parts over stationary axle inside gear box (1).

- thrust washer (2)
- thrust bearing (3)
- thrust washer (4)

2 Install crank wheel assembly (5) over gear box axle assembly.



4

Assembling the armature

1 Press bearing (B) onto armature shaft and install bearing cup (C) into rear bearing bore of motor housing (not shown).

2 See illustration below:

☞Refer to chart"A" below when removing or installing the armature fan. It is very important to press armature fan to dimension shown, then apply Loctite® 401 Porous Material Bonding Adhesive around the entire base of fan (360°). Allow the bonding agent to cure completely per manufacturers instructions.

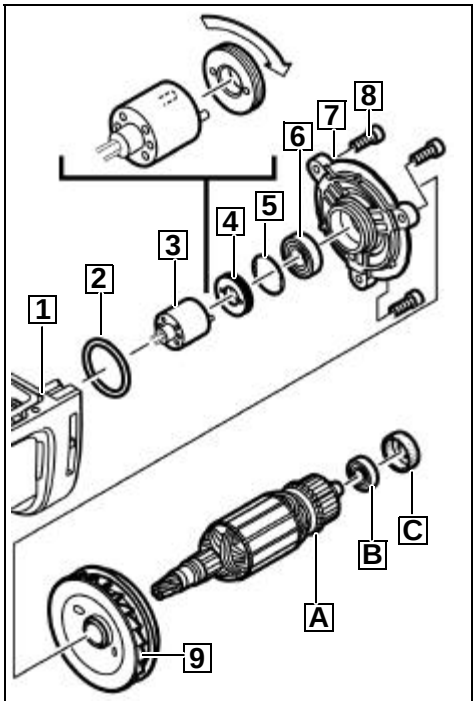
3 Press bearing (6) into bearing end plate (7) and install locking ring (5).

4 Install bearing end plate assembly (5,6,7) onto the armature shaft.

5 Screw in seal nut (4) with pin-type face spanner (3) [61-10-0012] (torque = 16 Nm / 141 in. lbs.).

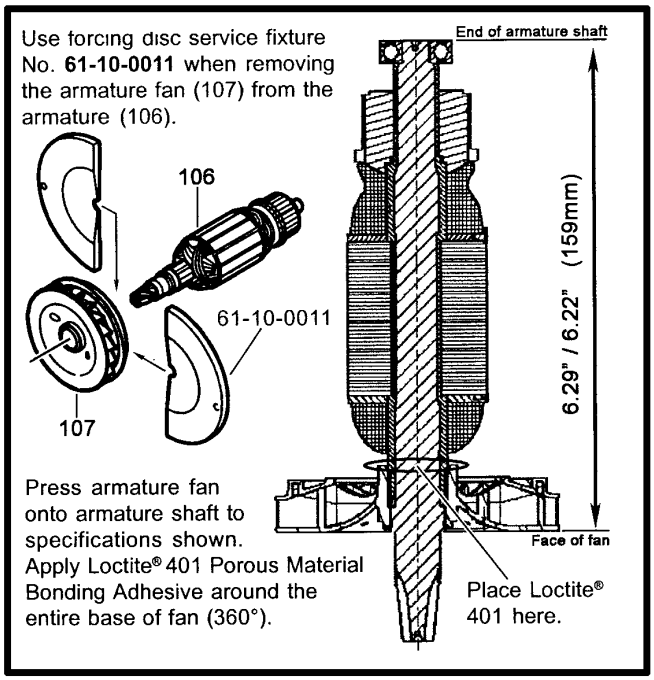
6 Install o-ring (2) into gear box (1).

7 Apply Blue Loctite® to three screws (8). Install bearing end plate with armature assembly (A) into rear bearing bore in gear box (1) and tighten the three screws (8) (torque = 4 Nm / 35 in. lbs.).



5

Chart "A"


Use forcing disc service fixture No. 61-10-0011 when removing the armature fan (107) from the armature (106).
106
61-10-0011
107
End of armature shaft
6.29" / 6.22" (159mm)
Face of fan
Press armature fan onto armature shaft to specifications shown.
Apply Loctite® 401 Porous Material Bonding Adhesive around the entire base of fan (360°).
Place Loctite® 401 here.

Installing the motor housing

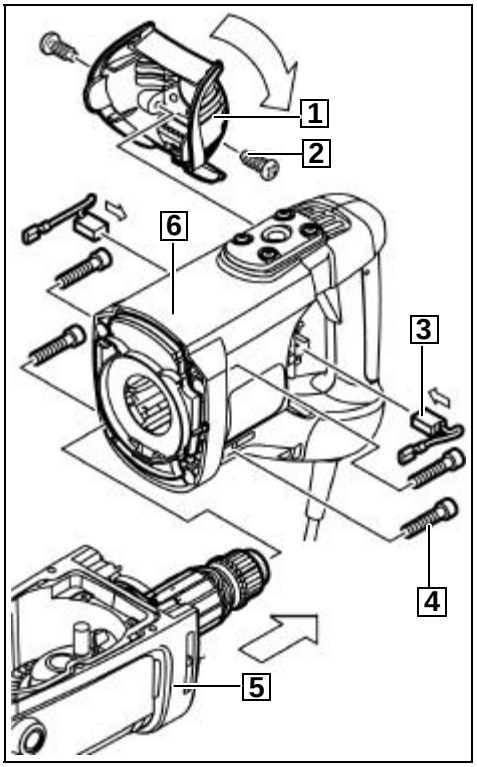
1 Apply Blue loctite® onto four screws (4). Install gear box and armature (5) into motor housing (6) and tighten four screws (4) cross-wise (torque = 13 Nm / 115 in. lbs.).

2 Install and connect carbon brushes (3) on both sides (refer to wiring instruction bulletin).

3 Install service cover (1) and secure it with two screws (2) (torque = 1.3 Nm / 12 in. lbs.).

☞Slant service lid (1) slightly when installing and tighten screws (torque = 1.3 Nm / 12 in. lbs.).

☞Note: Carbon brush set consists of two brushes, one brush has a secondary lead incorporated into it. This lead must be connected to the electronic module at this time.



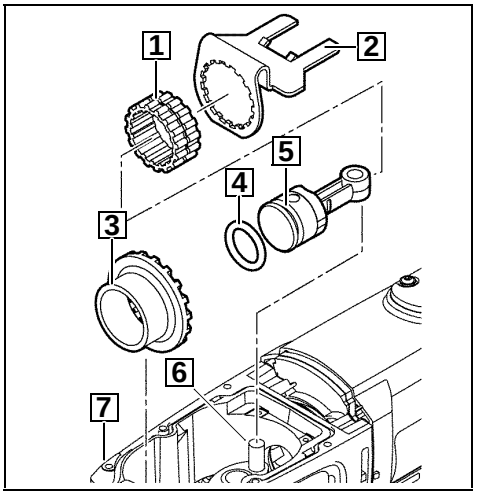
6

Installing the piston

1 **Combined drill/chisel hammer:** Install spindle bevel gear (3) into gear box (7).

2 Install O-ring (4) onto piston (5).

3 Insert piston (5) into the set collar (1) and locking plate (2). Install assembly into gear box: put connecting rod of piston (5) on pin (6) of crank wheel.



7

Assembling the spindle

1 Install thrust washer (C), back-pressure o-ring (B), and thrust collar (A) into spindle (E). Lubricate prior to assembly.

☞ Mind the right position when installing thrust collar (A): the bevel-edge of thrust collar (A) must face striker (8)!

2 **Check:** should striker guide (6) or rollers (D) be damaged or burred, **all parts must to be replaced** (striker and striker guide).

3 Install O-ring (7) onto striker guide (6). Install three O-rings (9) onto striker (8) and insert the assembly into striker guide (6).

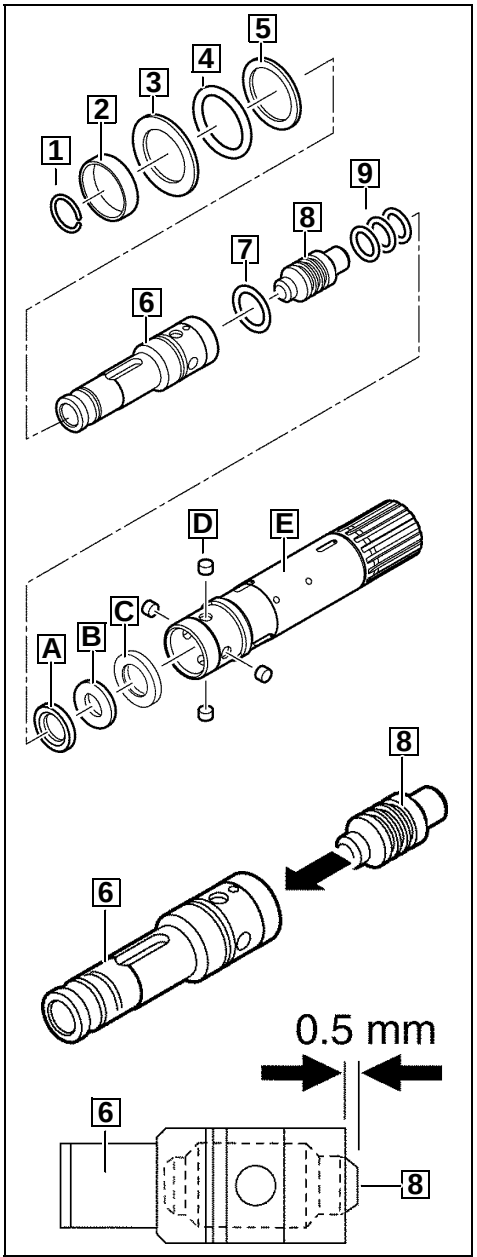
☞ The short end of striker (8) must face the nosepiece!

☞ The striker (8) must protrude the striker guide (6) approx. 0.5 mm!

4 Install striker guide assembly (6,7,8,9) into spindle (E) facing thrust collar (A).

5 Install four rollers (D) into spindle (E).

6 Install the following parts onto spindle (E):
- attachment washer (5)
- o-ring (4)
- washer (3)
- roller race (2)
- retaining ring (1).



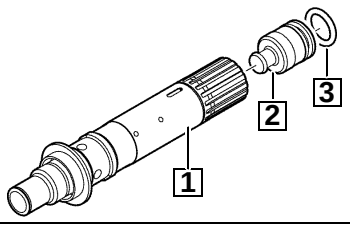
8

Assembling the ram into the spindle

1 Install o-ring (3) onto ram (2). Lubricate ram prior to assembly.

2 Install ram assembly (2 and 3) into spindle (1).

☞ Lubricate front of gear box per lubrication chart specifications prior to installing spindle assembly.



9

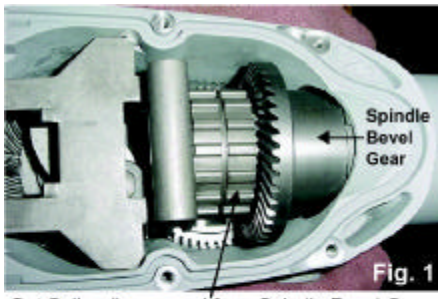
SDS Max combined drill/chisel hammer:

To check static slip of clutch

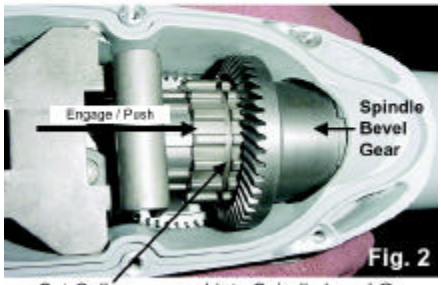
1. Secure hammer gear box in a machinists vise.
2. Install service fixture #61-10-2060 into front spindle.
3. Engage / lock external splines of set collar into internal splines of spindle bevel gear (figs. 2 and 3).
4. Install a piece of nylon bar stock or equivalent material, approximately 3/4" x 1-1/8" in between locking plate and gear box. Turn service fixture slowly clockwise until nylon bar stock is wedged tight between wall of gear box and crank wheel, as shown (fig. 3). Once crank wheel has been secured, continue to turn torque wrench in a clockwise direction until clutch slips.
5. Clutch must slip at 96-140 ft. lbs. (130-190 Nm.) at spindle, checked clockwise as viewed from the front of the tool. (Refer to note below).

Note: If the static slip of the clutch doesn't fall between the listings, do the following:

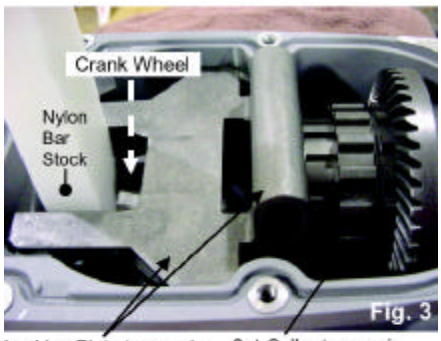
Run the tool at the highest speed ("G" on the dial switch) for 10 minutes. Immediately remove gear box cover and insert recommended nylon / plastic block into gear box to prevent gears from rotating. Turn the torque wrench clockwise and slip the clutch 8 times before actual slip torque readings are taken. Take an additional 8 slip torque readings and determine the average of the 8 readings. The average should be within the torque range specified.



Set Collar disengaged from Spindle Bevel Gear



Set Collar engaged into Spindle bevel Gear



Locking Plate to remain in original position in gear box.

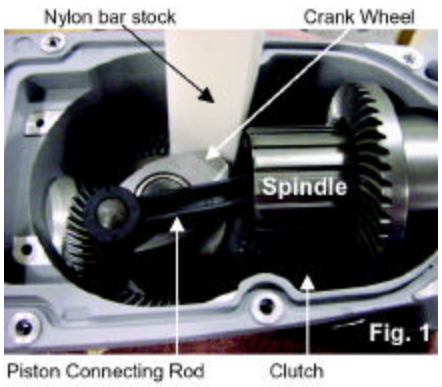
Set Collar to remain engaged into internal splines of spindle bevel gear when testing static slip of clutch.

10

Spline hammer:

To check static slip of clutch

1. Install service fixture #61-10-2065 into front spindle.
2. Install a piece of nylon bar stock or equivalent material, approximately 3/4" x 1-1/8" into gear box on the opposite side of piston connecting rod. Turn service fixture slowly clockwise until nylon bar stock is wedged tight between wall of gear box and crank wheel, as shown (fig. 1). Once crank wheel has been secured, continue to turn torque wrench in a clockwise direction until clutch slips.
3. Clutch must slip at 96-140 ft. lbs. (130-190 Nm.) at spindle, checked clockwise as viewed from the front of the tool. (Refer to note above).



10

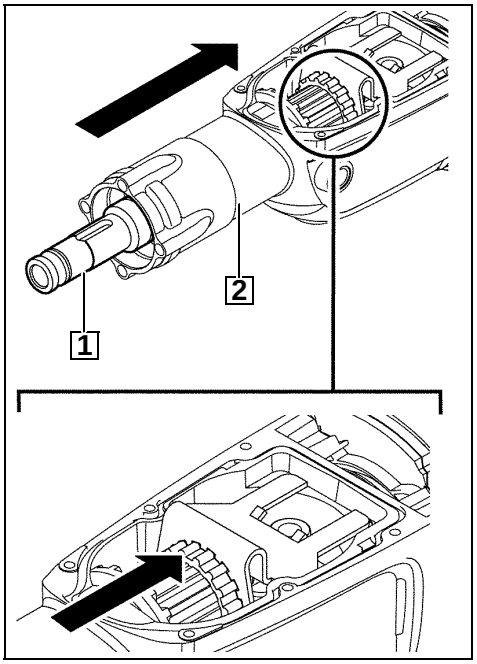
Combined drill/chisel hammer:

Installing the spindle

1 Install complete spindle assembly (1) into gear box (2) as far as it will go, aligning external splines on spindle (1) with internal splines of previously installed spindle bevel gear.

☞Piston assembly must enter the rear/end of spindle assembly!

☞Spindle assembly (1) gets the necessary lubrication when it is inserted into gear box (2).



11

Chisel hammer:

Installing the spindle

1 To prepare, place o-ring (1), washer (2) and locking ring (3) into gear box (5).

2 Install complete spindle assembly (4) into gear box (5) and lead it through o-ring (1), washer (2) and retaining ring (3).

☞Spindle (4) gets the necessary lubrication when it is inserted into gear box (5).

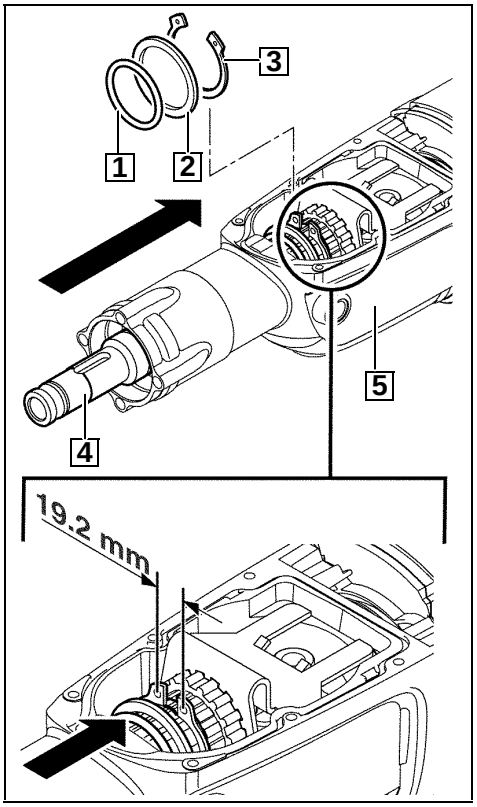
3 Insert spindle (4) as far as it will go.

☞Piston (6) must enter the rear/end of spindle!

4 Install retaining ring (3) completely into spindle groove.

☞The retaining ring (3) must audibly engage into the spindle groove!

☞Retaining ring (3) must be spread slightly when installing spindle assembly.



11

Installing the lever

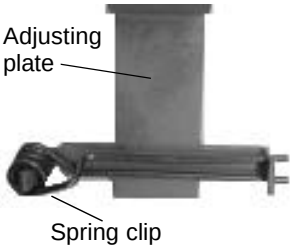
1 Install O-Ring (3) into opening of gear box cover (4).

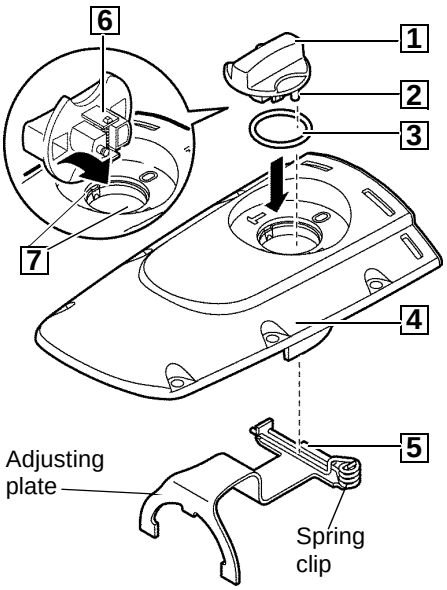
2 Squeeze together spring (6) at bottom side of lever and insert it sideways into opening of gear box cover (4), beginning at the two lugs (7).

3 Set the lever (1) to **0**.

4 Install spring clip onto adjusting plate (5), then onto pin (2) of lever (1). See illustration below.

5 Set lever (1) to the “chisel” setting .



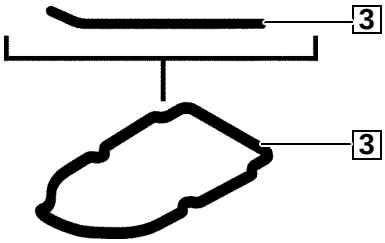


12

Installing the top gear box cover

1 Install gasket (3) into the gear box (4). Mind the right position!

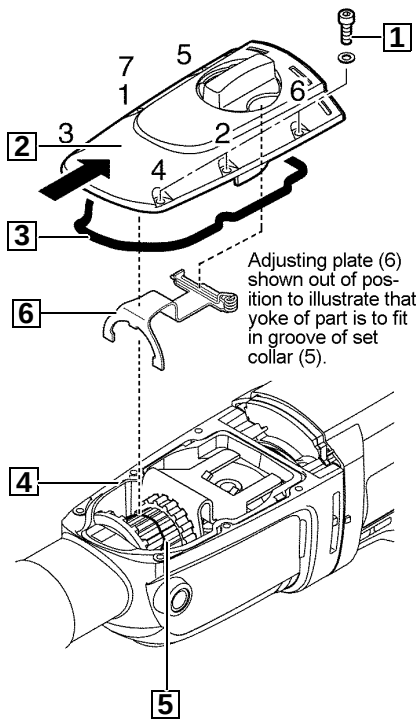
☞ Gasket (3) is in accordance with the gear box pre-formed and fits the groove of the gear box (4) exactly!



2 Install gear box cover (2): adjusting plate (6) must lock into place in the groove of the set collar (5) (see dotted line).

3 Install six screws with washers (1) into the gear box cover (2) and tighten (torque = 4.5 Nm / 40 in. lbs.).

☞ The six screws must be tightened according to indicated numbers (1–7) in ascending sequence! Push cover (2) slightly in direction of arrow!



13

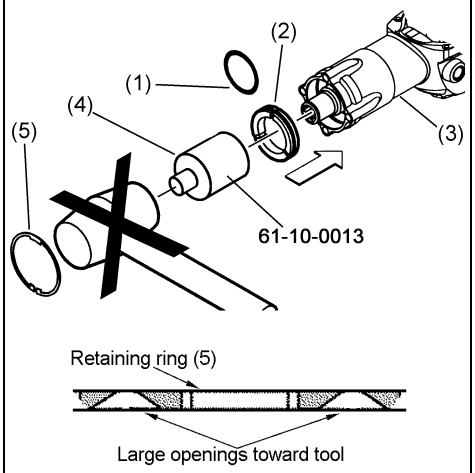
Installing the thrust collar

1 Install o-ring (1) onto thrust collar (2).

2 Position thrust collar assembly (1,2) into gear box (3) until the outside face of the thrust collar assembly (1,2) is flush with the face of the gear box (3). Place the open end of service fixture (4), 61-10-0013, over the spindle assembly and gently push the thrust collar assembly into the gear box (3).

☞ Both holes in retaining ring (5) are tapered. When assembling, small openings must face upward (large opening toward tool).

☞ The internal retaining ring groove must be visible after thrust ring (2) has been installed, if it is not, the spindle assembly may have been assembled incorrectly or is in a bind.



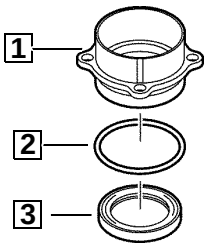
15

Assembling the seal retainer

1 Install outer o-ring (2) on seal retainer (1).

2 Press inner seal ring (3) into seal retainer (1).

☞ Inner seal ring (3) must be pressed flush to seal retainer surface with seal spring to face thrust ring inside gear box.



16

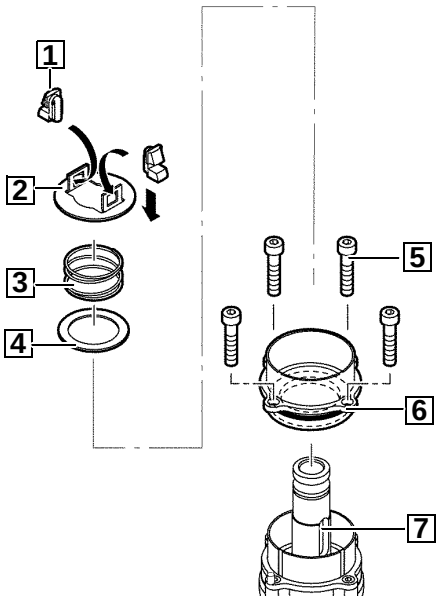
Assembling the interlock elements

1 Install assembled seal retainer (6) and fasten it with four screws (5) with aid of a hex key and tighten (18 Nm / 159 in. lbs.).

2 Install the following parts:
- washer (4)
- pressure spring (3)
- interlock plate (2).

3 Depress interlock plate (2) against pressure spring. Let both interlock elements (1) engage in interlock plate (2) as well as in openings of spindle sleeve (7).

☞ Using service fixture 61-30-0290 with two of the legs removed, will allow equal pressure to be applied to both sides of the interlocking elements for easy reassembly.



17

Installing the end cover cap

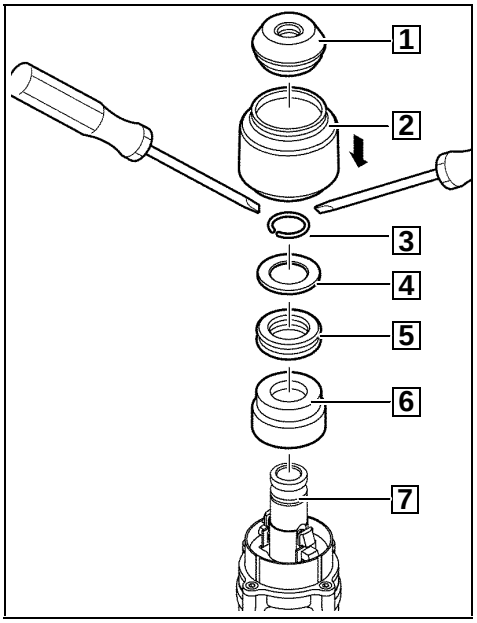
1 Install the following parts:
- interlock sleeve (6)
- damping ring (5)
- damping element / washer (4).

2 Install retaining ring (3), if necessary use two screwdrivers for support.

☞ Retaining ring (3) must lock into groove (7) of spindle!

3 Install sleeve (2) in direction of arrow.

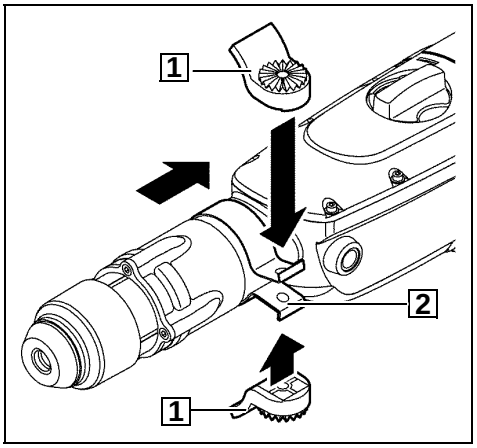
4 Depress sleeve (2) and install end cover cap (1).



18

Installing the spring ring

1 Push spring ring (2) over the machine from the front and install both retainers (1).

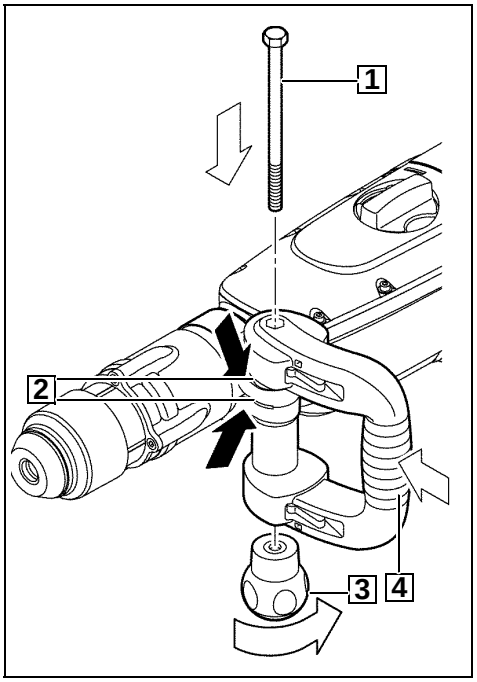


19

Installing the handle

1 Press retainers (2) together on both sides and install handle (4).

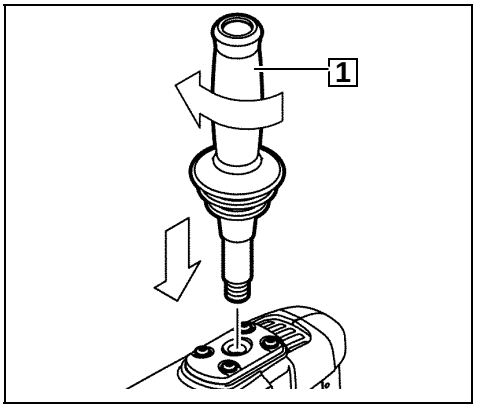
2 Insert screw (1) and screw down knob (3).



20

Installing the auxiliary handle

1 Screw down the auxiliary handle (1).



21

TEST RUN -
Run tool for a 5 minute run-in period.

ELECTRICAL TEST -
Perform electrical test on tool per Electrical and Mechanical Test Instructions, 58-92-0001.